

II. Remarks

By this amendment, applicants have amended claim 20, without prejudice. Claims 1, 5, 7, 17 and 18 have been canceled. Claims 2-4, 6, 8-16, and 19-21 are pending. Entry of the amendment and favorable reconsideration of this application is respectfully requested in light of the following detailed discussion.

Claim Objections

The Examiner has objected to claim 20 by stating that the instant claim depends from a canceled parent claim. Applicants have amended claim 20 to depend from pending claim 19, which applicants assert does not raise any new issue to be considered.

Applicants respectfully submit that claim 20 has been appropriately corrected and meets all formal claim requirements.

Claim Rejections – 35 U.S.C. § 103

1. The Examiner has rejected claims 2, 3, 4, 9, 15, 16, 19, and 21 under 35 U.S.C. 103(a) as being unpatentable over Montonen (U.S. Patent No. 5,383,947, hereinafter Montonen).

Specifically regarding independent claims 19 and 21, the Examiner asserts that Montonen teaches a press bending mold comprising an upper, curved or “full-face”

mold surface and a complimentary lower supporting ring mold or "annular mold." The Examiner further asserts that Montonen clearly teaches the presence of "a narrow annular port (5)" or peripheral annular groove which is connected with a suction channel (7) or "to a negative pressure source" (Column 1, Lines 52-64). The Examiner states that Montonen clearly depicts in figure 2 the annular channel or "groove" being formed in a region corresponding to "the molding contact area where a glass sheet is pressed between the full-face mold and the annular mold."

With respect to the identified dependent claims, the Examiner asserts that since the source of negative pressure is a fan (8), then simply running the fan in reverse would yield the claimed communication between the groove and a positive pressure source as set forth in claim 3. Further the Examiner alleges that as set forth in claim 9, Montonen teaches the presence of a "porous mold structure in the surface (12) of the full face mold." Thus, the Examiner says that the disclosure is read in the instant claim as providing additional flow channels and through-holes in the molding face of the full-face mold inside the area enclosed by the peripheral annular groove.

The Examiner concludes that with respect to claims 15 and 16, Montonen teaches that the full-face mold can be constructed of "a ceramic mass" (Column 2, line 65) and that electrically resistive heating elements can be provided (Column 3, Lines 9-26) in order to heat the mold.

Applicants, however, traverse these rejections under 35 U.S.C. 103(a) of claims 2, 3, 4, 9, 15, 16, 19, and 21 as being unpatentable over Montonen by asserting that independent claim 19 requires at least the limitations of the first mold having a major surface with at least one peripheral annular groove thereon, and independent claim 21, from which claims 2, 3, 4, 9, 15, and 16 directly or indirectly depend, requires at least the limitations of a full-face mold having a mold face, the mold face having at least one peripheral annular groove formed in the surface thereof.

After studying Montonen, applicants cannot find in Montonen where this reference teaches said limitations. Instead, applicants find Montonen to teach vacuuming air from the “edges” (via suction port 5) of a space 3 between a porous mold 2 and a ring mold 13 (see, for example, Abstract). In addition, applicants find that the “edges” of the mold 2 are surrounded by a ring-like wall 4 that defines the suction port 5 “between the wall 4 and the edge of the mold 2” (see, for example, column 1, lines 52-54 and Fig. 2). Hence, Montonen’s suction port 5 is not equivalent to the claimed limitations of at least one peripheral annular groove formed on/in the surface of the male mold, as claims 2, 3, 4, 9, 15, 16, 19, and 21 require.

Further, applicants contend that since Montonen teaches the “porous mold structure in the surface 12 of the full face mold 2,” as the Examiner confirms above, then Montonen would defeat the purpose of the suction port 5 (i.e., attaching and

releasing the glass sheet 1), if the suction port 5 were to be disposed in the surface 12 of the full face mold 2. To support this contention, applicants assert that if the suction port 5 were to be surrounded by the porous mold structure, then the suction port 5 would draw air out of the porous mold structure and, consequently, would not be able to properly draw a vacuum in the space 3 (i.e., would not properly and evenly attach and detach the glass sheet).

Further, applicants find that claims 2, 3, 4, 9, 15, 16, and 21 also require at least the limitations of the at least one peripheral annular groove being formed in a peripheral area that corresponds to the molding contact area where a glass sheet is pressed between the full-face mold and the annular mold. After studying Montonen's Fig. 2, applicants find this reference to illustrate that in the peripheral area the molding contact of the glass sheet 1 is between the ring mold 13 and "the wall 4."

Therefore, claims 2, 3, 4, 9, 15, 16, 19, and 21 are patentable over Montonen, as the claimed invention defined thereby is not suggested within Montonen, nor is there any suggestion or motivation to modify this reference's teachings in order to teach or suggest the claimed limitations, as required by 35 U.S.C. § 103.

Consequently, claims 2, 3, 4, 9, 15, 16, 19, and 21, should be allowed over Montonen. Accordingly, withdrawal of the rejection of claims 2, 3, 4, 9, 15, 16, 19, and 21 and favorable reconsideration of claims 2, 3, 4, 9, 15, 16, 19, and 21 are respectfully requested.

2. The Examiner has rejected claims 2, 3, 4, 9, 15, 16, 19, and 21 under 35 U.S.C. 103(a) as being unpatentable over Montonen in view of Posney (U.S. Patent No. 3,595,636, hereinafter Posney). The Examiner asserts that Montonen teaches a continuous groove or "slotted annular structure" but concedes that Montonen remains silent regarding the presence of a plurality of holes located within the annular groove.

However, the Examiner then asserts that Posney teaches a structured mold having an apertured wall contoured to the desired shape of the bent glass sheet and having elongated, shallow grooves and a row of apertures contained therein for delivery of fluid under pressure to the surface of the glass sheet. With respect to the structure of the mold surface, the Examiner asserts that Posney clearly sets forth that the recessed aperture structure in the disclosed mold is "less fragile than molds slotted throughout their entire thickness" (Column 2, Lines 63-69).

From this the Examiner concludes that where the peripheral annular groove of the Montonen mold is understood to embody a structure "slotted through the entire thickness," it would have been obvious to adopt the aperture-in-groove structure taught by Posney. The Examiner further concludes that the modification of the Montonen structure to include holes or apertures within the annular groove would have been an obvious alteration to one of ordinary skill in the art, at the time of the invention, seeking to make the mold structure less fragile as taught by Posney. Under the combined

teachings of Posney and Montonen, the Examiner asserts that the holes would be connected together by the at least one peripheral annular groove as set forth in claim 6.

Applicants, however, traverse these rejections of claims 2, 3, 4, 9, 15, 16, 19, and 21 under 35 U.S.C. 103(a) as being unpatentable over Montonen in view of Posney by asserting that independent claim 19 requires at least the limitations of disposing at least one hole defined within the at least one peripheral annular groove and that independent claim 21 requires at least the limitations of the at least one peripheral annular groove having a plurality of holes located therein.

As asserted above, applicants do not find Montonen's suction port 5 to satisfy the claimed limitations of at least one peripheral annular groove formed on/in the surface of the male mold. Therefore, it follows that since Montonen does not have a peripheral annular groove(s) formed on/in the surface of the male mold, then Montonen cannot have a hole(s) (for example, Posney's apertures 72) defined/located therein. Also, logic dictates that a hole(s) cannot be defined in Montonen's suction port 5, which is simply a void or a space.

Thus, Posney does nothing to overcome the shortcomings of Montonen. Therefore, claims 2, 3, 4, 9, 15, 16, 19, and 21 are patentable over Montonen in view of Posney, as the claimed invention defined thereby is not suggested within either Montonen or Posney, nor is there any suggestion or motivation to modify or combine

these references' teachings in order to teach or suggest the claimed limitations, as required by 35 U.S.C. § 103.

Consequently, claims 2, 3, 4, 9, 15, 16, 19, and 21 should be allowed over Montonen in view of Posney. Accordingly, the withdrawal of the rejections of claims 2, 3, 4, 9, 15, 16, 19, and 21, and the favorable reconsideration of claims 2, 3, 4, 9, 15, 16, 19, and 21 are respectfully requested.

3. The Examiner has rejected claims 6, 8, and 10-14 under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Montonen and Posney as applied to claims 19 and 21 above, and further in view of Yoshizawa (U.S. Patent No. 5,139,552 hereinafter Yoshizawa).

For these rejections, the Examiner provides a very detailed list of assertions as they are seen to apply to the claimed invention of claims 6, 8, and 10-14.

However, since claim 21 is patentable over Montonen in view of Posney, then claims 6, 8, and 10-14, which depend directly or indirectly from claim 21, are also patentable, at least on this basis.

Further, applicants assert that Yoshizawa does nothing to overcome the shortcomings of Montonen and Posney. Therefore, claims 6, 8, and 10-14 are patentable over the combined teachings of Montonen and Posney as applied to claims 19 and 21 above, and further in view of Yoshizawa, as the claimed invention defined thereby is not suggested within either Montonen, Posney, or Yoshizawa, nor is there

Appl. No. 10/669,745
Response Dated March 9, 2007
Reply to Office Action of December 18, 2006

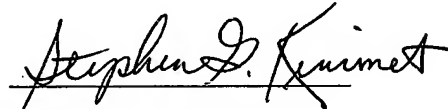
any suggestion or motivation to modify or combine these references' teachings in order to teach or suggest the claimed limitations, as required by 35 U.S.C. § 103.

Consequently, claims 6, 8, and 10-14 are patentable over the combined teachings of Montonen and Posney as applied to claims 19 and 21 above, and further in view of Yoshizawa. Accordingly, the withdrawal of the rejections of claims 6, 8, and 10-14, and the favorable reconsideration of claims 6, 8, and 10-14 are respectfully requested.

For all the reasons described in the preceding paragraphs, applicants respectfully submit that the present application is now in condition for allowance. Accordingly, a timely action to that end is courteously solicited.

If the Examiner has any remaining questions or concerns, or would prefer claim language different from that included herein, the favor of a telephone call to applicants' attorneys is requested.

Respectfully submitted,

A handwritten signature in black ink, reading "Stephen G. Kimmet", written over a horizontal line.

Stephen G. Kimmet
Registration No. 52,488

ATTORNEYS

Marshall & Melhorn, LLC
Four SeaGate – 8th Floor
Toledo, Ohio 43604
Phone: (419) 249-7132
Fax: (419) 249-7151